

CLAIMS

The invention claimed is:

1. A comminuting apparatus, comprising:

a frame having an enclosure with an entrance for receiving waste material;
a set of overlapping scissor rolls including a feed scissor roll and a recirculation scissor roll, both the feed scissor roll and the recirculation scissor roll carried for co-rotation within the enclosure and operative to comminute the waste material into subdivided pieces by drawing the received waste material beneath the feed scissor roll and up between the feed scissor roll and the recirculation scissor roll;

a shear outtake manifold beneath the scissor rolls and configured to collect the subdivided pieces of waste material;

a screen interposed between the set of scissor rolls and the shear outtake manifold and operative to permit undersized smaller pieces of a size less than a predetermined size to pass therethrough and to prevent oversized pieces of a size greater than a predetermined size from passing therethrough; and

a pneumatic conveyor comprising a source of air flow and a pneumatic duct communicating with an upstream end of the shear outtake manifold and operative to deliver an airstream from the source of air flow into the shear outtake manifold that entrains the subdivided pieces and removes the subdivided pieces from the shear outtake manifold.

2. The comminuting apparatus of claim 1 further comprising a stripping finger member individually associated with the feed scissor roll and the recirculation scissor roll to control movement of comminuted waste material.

3. The comminuting apparatus of claim 1 further comprising a recycle manifold provided downstream and above the feed scissor roll and the recirculation scissor roll, the recycle manifold being configured to receive subdivided pieces that have passed between the feed scissor roll and the recirculation scissor roll.

4. The comminuting apparatus of claim 1 wherein the feed scissor roll and the recirculation scissor roll are carried by the frame in substantially parallel and horizontal relation with axes of the scissor rolls, wherein the screen is substantially beneath the set of scissor rolls, and the shear outtake manifold is substantially beneath the screen.